TDA7237

QUAD DIFFERENTIAL LINE DRIVER

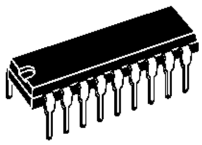
PRODUCT PREVIEW

DESCRIPTION

The quad differential line driver is a monolithic integrated circuit intended to provide low noise, low distortion voltage gain.

Additionally, the signal is converted from a single ended to a differential signal pair for applications reuiring signal isolation from DC grounded.

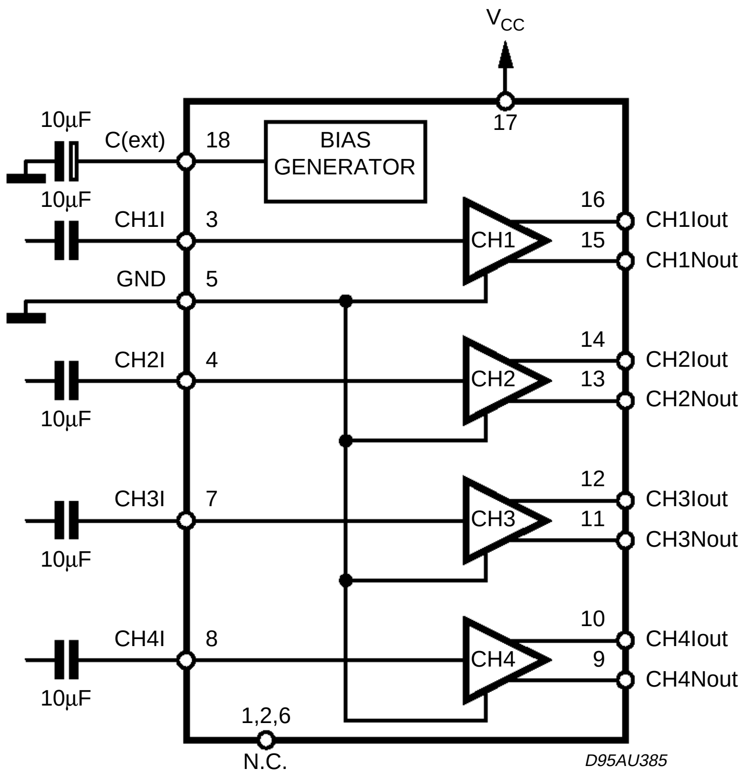
The four channel's gains are matched within 1dB.



DIP18

ORDERING NUMBER: TDA7237

BLOCK DIAGRAM

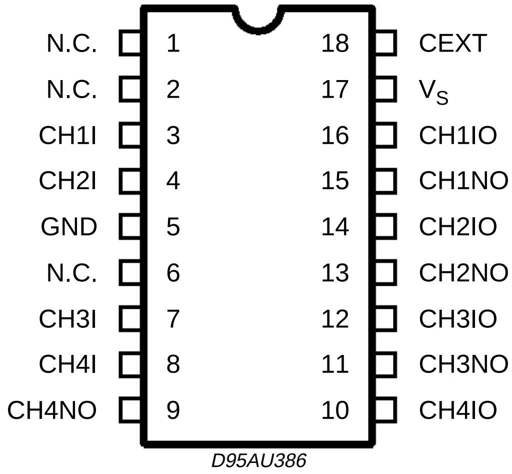


This is advanced information on a new product now in development or undergoing evaluation. Details are subject to change without notice.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage	20	V
P_{tot}	Total Power Dissipation	750	mW
T_{amb}	Operating Ambient Temperature	-40 to 85	°C
T_{stg}	Storage Temperature	-55 to 150	°C

PIN CONNECTION



THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th\ j\text{-}pins}$	Thermal Resistance junction - pins	90	°C/W

PIN FUNCTIONS

N.	Name	Function
1	N.C.	
2	N.C.	
3	CH1I	Input to channel one
4	CH2I	Input to channel two
5	GND	Ground
6	N.C.	
7	CH3I	Input to channel three
8	CH4I	Input to channel four
9	CH4NO	Channel four non inverting output
10	CH4IO	Channel four inverting output
11	CH3NO	Channel three non inverting output
12	CH3IO	Channel three inverting output
13	CH2NO	Channel two non inverting output
14	CH2IO	Channel two inverting output
15	CH1NO	Channel one non inverting output
16	CH1IO	Channel one inverting output
17	V_S	Supply Voltage
18	CEXT	By-pass Capacitor

ELECTRICAL CHARACTERISTICS (V_{CC} = 10V; T_{amb} = 25°C; f = 1KHz, unless otherwise specified.)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		9		11	V
Z_I	Input Impedance		15	23	30	KΩ
SVR	Supply Voltage Rejection	f = 10KHz	35	45		dB
Isg	Output Short Circuit Current to GND	each pin		40		mA
		all pins		300		mA
	Output Short Circuit Current to V_{CC}	each pin		20		mA
		all pins		150		mA
Is	Supply Current			35	50	mA
S_R	Slew Rate	R_L = 10KW; C_L = 1000pF		3		V/µs
S/N	Signal to Noise Ratio (1)		83	91		dB
THD	Total Harmonic Distortion	$V_O = 4V_{RMS}$; R_L = 10KW; C_L = 1000pF		0.07	0.1	%
C_S	Channel Separation	(2)	70	80		dB
V_{IDC}	DC Input Voltage		5.8	6.25	6.6	V
V_{ODC}	DC Output Voltage		3.9	4.75	5.3	V
V_{CDC}	DC C_{ext} Voltage	pin 18	5.8	6.25	6.6	V
Z_O	Output Impedance			50	100	Ω
G_V	Voltage Gain		15.9	16.7	17.5	dB

Notes:

1) Bw = 20Hz to 20KHz with 60dB/decade Rolloff (referred to $1.4V_{RMS}$)

2) All input AC grounded via 10µF capacitor

DIP18 PACKAGE MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
a1	0.254			0.010		
B	1.39		1.65	0.055		0.065
b		0.45			0.018	
b1		0.25			0.010	
D			25.4			1.000
E		8.5			0.335	
e		2.54			0.100	
e3		22.86			0.900	
F			7.1			0.280
I			3.93			0.155
L		3.3			0.130	
Z			1.34			0.053

